3rd Harmonic Monday Meeting Minutes

Date: July 30, 2007
Time: 9:00 A.M.
Place: Hermitage

Attendees (P=Present, Ph=attended by phone):

T. Arkan		H. Edwards	P	D. Olis	P	G. Wu	P
L. Bellantoni	P	M. Foley	P	P. Pfund		John Z.	P
H. Carter		E. Harms	P	S. Reeves	P	E. Vogel	Ph
M. Champion		A. Hocker		L. Ristori	P	J. Li	P
L. Cooley		H. Jiang	P	A. Rowe	P	J. Dwivedi	P
C. Cooper		T. Khabiboulline	P	N. Solyak			
N. Dhanaraj		D. Mitchell	P	Y. Torun	P		

Minutes recorded by Dan.
Minutes are posted at: http://tdserver1.fnal.gov/dolis/39GHz_minutes.html
3.9GHz Project page is: www-a0.fnal.gov

Meeting Minutes

Cavity status

- Timer reports cavity-6 achieved 22MV/m before quench in bottom HOM. X-rays started at 9.5MV/m. Poor vacuum during test, 2e-8Torr (10^-9Torr typical). Cold leak seen during warm-up. Leak found in brazed joint of feedthru. Cavity is HPR'd and will be retested late this week.
- Mike reports that cavity-8 end assemblies are welded. End tubes and MC tube need to be faced off and field probe tube bored out. Then Timer will perform an RF measurement on them and specify how much material to trim. Mike has 8/17 weld date at Sciaky.
- Mike reports that JLAB will soon finish end tubes and Timer will also do RF measurement to determine trim lengths.
- Mike's priorities: 1) ship mat'l to JLAB for cavity-7, 2) finish cavity-8, 3) single cell effort.
- Mike reports that he is receiving requests for single cell cavities from all directions. Genfa shared a table summary of single cell R&D. Separate meeting will be called to discuss how many cavities are required and whether some existing 3-cell cavities could be used. Mike will check on mat'l inventories.

Helium Vessels

- John Z. reports that pieces for first helium vessel, excluding the bellows, are in inspection. Bellows will be fab'd by Ameriflex and are expected mid to late Aug. Don and Mike report that Danny Watkins and Al Buetler will weld it onto cavity-3 here at Fermi.
- Don is revising some notes on vessel drawings to indicate it is vendor's option to pickle material before welding, as AWS G2.4 2007 allows. Helen asked Don to send his drawings to JLAB for comment and to request copy of JLAB's procedure.
- Hairong reported on results of hardness test on a weld from one of the rejected He vessels. Test piece removed from vessel includes portion of bellows and straight tube. Vickers hardness measured on weld and at 1mm increments from weld through heat affected zone on tube. Results consistent with data published by P. Danielson, "Microstructure of Titanium Welds," DOE Albany Research Center for "low oxygen" welds. Hairong will attempt a bend test on a sample cut from same vessel but advises that sample geometry will not meet ASME spec.

Main Couplers

- Dan presented coupling test and antenna trim plan for Cold End Assemblies. Coupling test is room temperature and without vacuum, and uses spare coupler test stand to hold coupler onto cavity. Cavity-6 will likely be used after next vertical test.
- Timer will look at cavity QC data to understand perpendicularity of coupler flange to cavity center axis.

Other Business

- John Z. reports that vacuum vessel was cleaned to remove lithium grease and all cutting fluids. Leak test is proceeding. Helen requests an RGA measurement.
- Don reports that he, Ruben, Kay Jench, et al. met Tuesday to discuss: interface to test facility and TTF, pressure codes and tests, shipping, module test at DESY, alignment, etc. Regular meetings will continue.
- Genfa reports that he is working on a test plan to thermally cycle feedthru's as part of initial QC. He learned in conversation with W-D Moeller that DESY no longer thermally shocks feedthru's. Wolf reports via email: "we still do thermal cycles on all our feedtru's before we use them. We don't do it in an open LN2 bath and gun heating anymore. Now we do it in a cryostat with LHe, 3 times 4K and RT. We changed because of the possibility of condensed water on the feedthru's during the second and 3rd cool down and the danger of disruption."
- Genfa will present his plasma test plan next week.